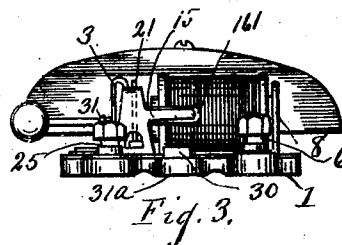
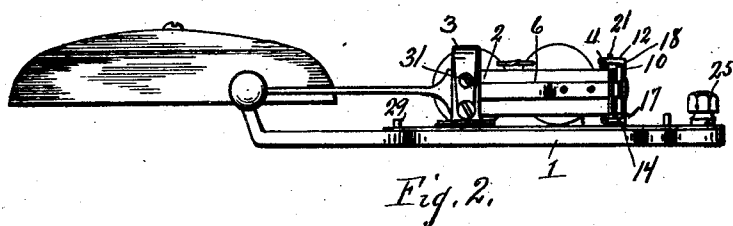
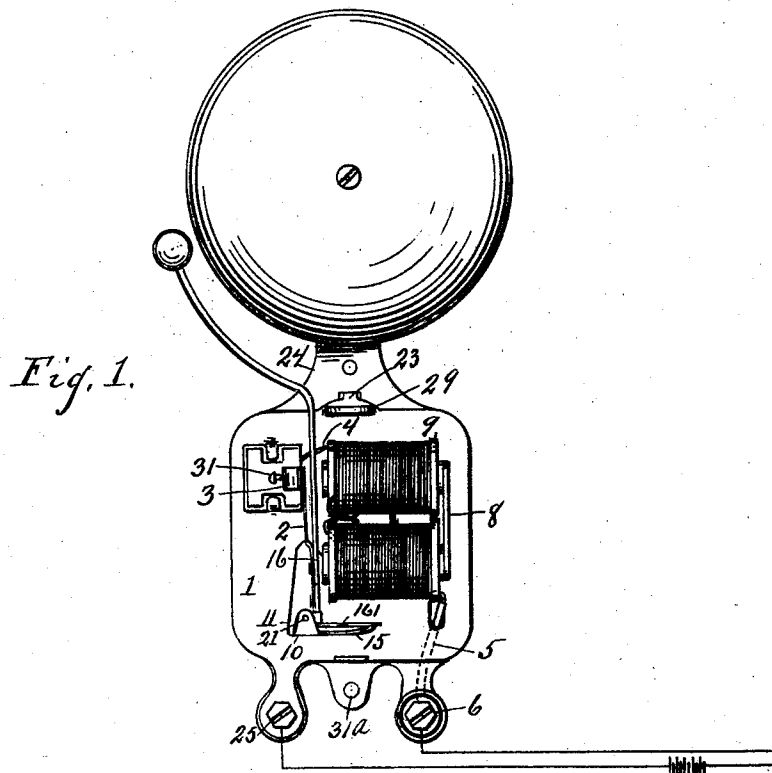


No. 865,771.

PATENTED SEPT. 10, 1907.

H. W. EDEN.
ELECTRIC SIGNAL BELL.
APPLICATION FILED JULY 18, 1906.

2 SHEETS—SHEET 1.



WITNESSES
May E. Kott
Lotta Lee Hayton.

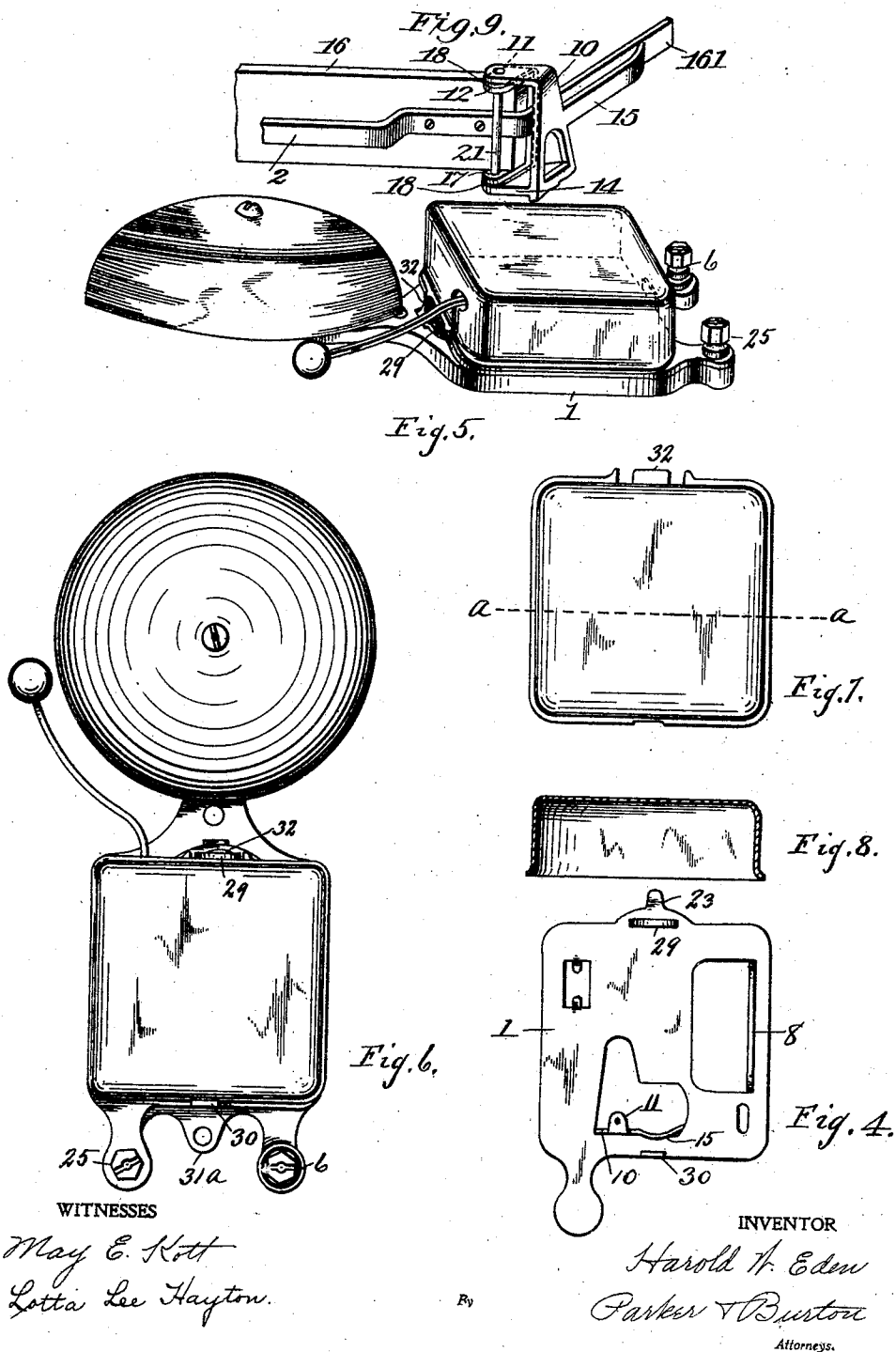
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2 SHEETS—SHEET 2.



UNITED STATES PATENT OFFICE.

HAROLD W. EDEN, OF DETROIT, MICHIGAN, ASSIGNOR TO P. R. MANUFACTURING COMPANY,
OF DETROIT, MICHIGAN, A CORPORATION OF MICHIGAN.

ELECTRIC SIGNAL-BELL.

No. 865,771.

Specification of Letters Patent.

Patented Sept. 10, 1907.

Application filed July 18, 1906. Serial No. 326,644.

To all whom it may concern:

Be it known that I, HAROLD W. EDEN, a citizen of the United States, residing at Detroit, county of Wayne, State of Michigan, have invented a certain new and
5 useful Improvement in Electric Signal-Bells, and declare the following to be a full, clear, and exact description of the same, such as will enable others skilled in the art to which it pertains to make and use the same, reference being had to the accompanying drawings,
10 which form a part of this specification.

This invention relates to electric signal bells; it has for its object an improved construction of electrically actuated signal bells.

In the drawings:—Figure 1, is a plan view. Fig. 2, is a side elevation. Fig. 3, is an end elevation. Fig. 4, is an elevation, showing the face plate which covers the casting that forms the main support of the bell. Fig. 5, is a perspective of the bell, with cover there-
15 over. Fig. 6, is a plan view of the covered bell. Fig. 7, is a plan view of the cover. Fig. 8, is a section through the cover. Fig. 9 is a detail perspective, on an enlarged scale, of the trunnion of the armature, showing the non-magnetic yoke.

In the bell whose construction forms the object of
25 this invention, the electrical current is carried into the binding post 25, from thence through the plate upon which the magneto is mounted, especially through the face plate 1, which will be spoken of hereinafter, to the vibrating tongue 2, thence through a
30 post 3, which is insulated from the plate 1, thence through the magnet which is connected to the post 3, by a wire 4, and from the magnet through an insulated wire (shown in dotted lines) to the binding post 6.

The face-plate 1, is made from sheet metal from which
35 portions are partially cut, and bent to support the motor parts and moving parts of the structure. A bracket 8 is cut from the body of the material, and bent at right angles to support the magnet 9. A bracket 10 is cut and bent upward with an overhang 11, to support the
40 upper trunnion 12 of the armature.

From the lower part of the bracket 10, a lug 14 is turned out to support the lower trunnion 17 of the armature. On the bracket 10 is an arm 15, which serves as an abutment for the spring 161 that retracts the
45 armature. The armature 16 is of sheet metal and has the vibrating tongue 2 riveted to it; the tongue itself is made of resilient metal, and the tail of it is bent around to form the retracting spring 161, (which in this case is a leaf-spring), while the forward end of it
50 is bent away from the armature to form the spring contact against the vibrator screw 31. At the end of the armature are ears 12 and 17, which, together with the pin 21, which passes through them, and the overhang-
ing lugs 11 and 14, serve in the place of trunnions.

Between the upper ear 12 and the overhanging lug

11, and between the lower ear 17 and the step lug 14, is a yoke 18, of non-magnetic material and the pin 21 is itself of non-magnetic material, and there is no contact between two magnetic materials at this point. The face plate 1, is itself of sheet metal with a project-
60 ing point 23, that engages in a perforation through the cast base that supports the entire structure. The point 23, is inserted in the hole of the casting, the plate 1 brought down upon the surface of the casting, and binding post 25, secured in place, and this secures the
65 face plate to the casting; the face-plate carries all the motor parts of the bell; the second binding post 6 is inserted in the casting itself, but insulated therefrom in the ordinary way, and a single short wire leads from this post 6 to the spool of the magnet 9, and this with a
70 short piece of wire which leads from the insulated vibrator post to the second spool of the magneto is the only wiring necessary in the construction. The wiring leads from one spool to the other near the arma-
75 ture.

Just back of the point 23, is a loop 29, for the insertion of a point 32 on the shell which covers the motor parts. At the end opposite the loop and between the posts 25 and 26, in the assembled structure is a catch
80 30 that engages over a lip on the shell.

31* indicates a lug on the casting, provided with a screw hole, through which the screw is inserted to secure the casting in its place of use.

What I claim is:—

1. In an electrically actuated bell, in combination with
85 a base, a sheet of metal resting thereupon having struck up parts forming supporting brackets, an armature and a pair of coils supported thereby, a non-magnetic yoke spacing the armature from its supporting bracket, and a contact post in electrical connection with the coils and
90 the armature, substantially as described.

2. In combination with a supporting base, a plate of sheet metal provided with brackets struck up therefrom adapted to be attached to said base by a single screw, magnetic spools supported thereby, an armature pivotally
95 supported thereby across the ends of the spools, a yoke of non-magnetic material spacing said armature from its supporting bracket, and a contact post insulated from said base and said plate and in constant electrical connection with the spools adapted to be in intermittent electrical connection with said armature, substantially as
100 described.

3. In combination with the foot bracket 14, and the overhanging bracket 11, formed on a base bent from the surface of a sheet of metal, an armature, a yoke of non-
105 magnetic material engaging between said bracket and said armature, and a pin securing the armature and the yoke to the brackets, substantially as described.

In testimony whereof, I, sign this specification in the presence of two witnesses.

HAROLD W. EDEN.

Witnesses:

LOTTA LEE HAYTON,
CHARLES F. BURTON.